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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/771,383 | 01/25/2001 | Kevin Delos Parris | 2368/12 | 6452 |

7590 07/02/2002

Craig J. Arnold, Esq.
Amster, Rothstein & Ebenstein
90 Park Avenue
New York, NY 10016

| EXAMINER | |
|---|---|
| GALITSKY, NIKOLAI M | |
| ART UNIT | PAPER NUMBER |
| 1631 | 8 |

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/771,383 | PARRIS ET AL. | |
| | Examiner | Art Unit | |
| | Nikolai M Galitsky | 1631 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-34* are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

The art unit designated for this application has changed. Applicant(s) are hereby informed that future correspondence should be directed to Art Unit 1631.

Applicant is hereby notified that the required timing for the correction of drawings has changed. See the last 6 lines on the sheet, which is attached, entitled "Attachment for PTO-948 (Rev. 03/01 or earlier)". Due to the above notification Applicant is required to submit drawing corrections within the time period set for responding to this Office action. Failure to respond to this requirement may result in abandonment of the instant application or a notice of a failure to fully respond to this Office action.

*Election/Restrictions.*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1 - 14, drawn to a crystallized of a molecule or a molecular complex of acyl carrier protein synthase (ACPS) enzyme, classified in class 436, subclass 4. If this group is elected, then the below summarized specie election also is required.

Group II. Claims 15 - 22, drawn to a method for identifying an agent that interacts with an active site of ACPS or ACPS complex, classified in class 702, subclass 27. If this group is elected, then the below summarized specie election also is required.

Group III. Claims 23 - 25, drawn to a method for identifying an inhibitor or an activator of a molecule or a molecular complex, comprising a CoA binding site, classified in class 702, subclass 27. If this group is elected, then the below summarized specie election also is required.

Group IV. Claims 26 - 28, drawn to an agent, classified in class 530, subclass 350. If this group is elected, then the below summarized specie election also is required.

Group V. Claims 29 - 30, drawn to a method for determining the molecule structure of a molecule or a molecular complex whose structure is unknown, classified in class 702, subclass 27. If this group is elected, then the below summarized specie election also is required.

Group VI. Claims 31 - 34, drawn to an active site of acyl carrier protein synthase, classified in class 702, subclass 27. If this group is elected, then the below summarized specie election also is required.

The inventions are distinct, each from the other because of the following reasons:

Although there are no provisions under the section for "Relationship of Inventions" in MPEP 806.05 for inventive groups that are directed to different products, restriction is deemed to be proper because the products of groups I, IV and VI constitute patentably distinct inventions for the following reasons:

Inventions Group I, Group IV and Group VI are drawn to the distinct products. The products are distinct physically, chemically and functionally and can have different use. These Groups are also classified in different classes and subclasses.

The inventions of Group I and Group III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (M.P.E.P. § 806.05(h)). In the instant case a crystallized a molecules or molecular complex of acyl carrier protein synthase (ACPS) of Group I is used in alternative methods of Groups II and V, drawn to a method for identifying an agent that interacts with an active site of ACPS or ACPS complex and a method for determining the molecule of a molecule or a molecular complex whose structure is unknown, respectively. In addition, the crystallized complex of acyl carrier protein synthase can be used in a method, for example, of homology modeling, which is also a clearly distinct usage of a crystal data.

The inventions of Group I and Group V are related as product and process of use. In the instant case a crystallized a molecules or molecular complex of acyl carrier protein synthase (ACPS) of Group I is used in alternative methods of Groups II and V, drawn to a method for identifying an agent that interacts with an active site of ACPS or ACPS complex and a method for determining the molecule structure of a molecule or a molecular complex whose structure is unknown, respectively. In addition, the crystallized complex of acyl carrier protein synthase can be used in a method, for example, of homology modeling, which is also a clearly distinct usage of a crystal data.

The methods of Groups II and III are patentably distinct. The invention of Group II is drawn to a computational method for identifying an agent that interacts with an active site of ACPS or ACPS complex by determining an active site of ACPS from three dimensional model of ACPS enzyme, whereas the invention of Groups III is directed to a method for identifying an inhibitor or an activator of a molecule or a molecular complex by, for example, selecting or designing a candidate activator or inhibitor and measuring the effect the candidate has on said molecule. The inventions of these Groups have different effects, and different modes of operation.

The inventions of Group II and Group IV are related as method of identifying and product. In the instant case an agent of Group IV practices in distinct inventions of Groups II and III, drawn to a computational method for identifying an agent that interacts with an active site of ACPS or ACPS complex by determining an active site of ACPS from three dimensional model of ACPS enzyme and a method for identifying an inhibitor or an activator of a molecule or a molecular complex, respectively. In addition, the agent of Group IV can be practice as a drug, which is also a clearly distinct usage of the agent.

The inventions of Groups II and V are patentably distinct. The invention of Group II is drawn to a computational method for identifying an agent that interacts with an active site of ACPS or ACPS complex by determining an active site of ACPS from three dimensional model of ACPS enzyme, which is not required for a method for determining the molecule structure of a molecule or a molecular complex whose structure is unknown.

The inventions of Groups II and VI are patentably distinct. The invention of Group II is drawn to a computational method for identifying an agent, which is not required in the invention of Group V, which is directed to an active side. The inventions of these Groups are physically and chemically distinct and have different functions, different effects.

The inventions of Group III and Group IV are related as method of identifying and product. In the instant case an agent of Group IV practices in distinct inventions of Groups II and III, drawn to a computational method for identifying an agent that interacts with an active site of ACPS or ACPS complex by determining an active site of ACPS from three dimensional model of ACPS enzyme and a method for identifying an inhibitor or an activator of a molecule or a molecular complex, respectively. In addition, the agent of Group IV can be practice as a drug, which is also a clearly distinct usage of the agent.

The inventions of Groups III and V are patentably distinct. The invention of Group III is drawn to a method for identifying an inhibitor or an activator of a molecule or a molecular complex, which is not required for a method for determining the molecule structure of a molecule or a molecular complex whose structure is unknown.

The inventions of Groups III and VI are patentably distinct. The invention of Group III is drawn to a method for identifying an inhibitor or an activator of a molecule or a molecular complex that is not required in the invention of Group V, which is directed to an active side. The inventions of these Groups are physically and chemically distinct and have different functions, different effects.

The inventions of Groups IV and V are patentably distinct. The invention of Group IV is drawn to an agent, which is not required for a method for determining the molecule structure of a molecule or a molecular complex whose structure is unknown.

The inventions of Groups IV and VI are patentably distinct. The invention of Group IV is drawn to an agent that is not required in the invention of Group V, which is directed to an active side. The inventions of these Groups are physically and chemically distinct and have different functions, different effects.

The inventions of Group V and Group VI are related as process of use and product. In the instant case the coordinates of the active side of Group VI is used in alternative inventions of Groups II and III, drawn to the distinct computational methods for identifying, for example, an agent or an inhibitor of molecule. In addition, the coordinates of the active side of Group VII can be used in a method of molecular modeling in x-ray crystallography to obtain the coordinates of a homologous structure, which is also a clearly distinct usage of a molecule or molecular complex coordinates.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR § 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the

currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

SPECIE ELECTION REQUIREMENT FOR GROUPS I -VI:

This application contains claim directed to the following patentably distinct species of the claimed invention: These species are distinct because they each add a feature to the methods identifying for a molecule or molecular complex of acyl carrier protein synthase (ACPS), or the agents with different and distinct functions, which each would require a separate and burdensome search to add to the search for the basic detection agents as defined above.

Group I:

Specie IA: a crystallized ACPS enzyme in space group $P2_1$;

Specie IB: a crystallized ACPS enzyme in space group R3;

If the specie A or B is elected, then an election one of next specie is also required:

Specie (I-i): amino acid residues of claim 2;

Specie (II-i): amino acid residues of claim 3;

Specie (III-i): amino acid residues of claim 4;

Specie (IV-i): amino acid residues of claim 5;

Group II:

Specie IA: a crystallized ACPS enzyme in space group $P2_1$;

Specie IB: a crystallized ACPS enzyme in space group R3;

If the specie A or B is elected, then an election one of next specie is also required:

Specie (I-j): an inhibitor of ACPS activity;

Specie (II-j): an activator of ACPS activity;

Group III:

Specie IIIA: the structural coordinates of Figure 1;

Specie IIIB: the structural coordinates of Figure 2;

If the specie A or B is elected, then an election one of next specie is also required:

Specie (I-k): a CoA binding site of the claim 23;

Specie (II-k): a CoA binding site of the claim 24;

Specie (III-k): a CoA binding site of the claim 25;

Group IV:

Specie IIIA: the structural coordinates of Figure 1;

Specie IIIB: the structural coordinates of Figure 2;

If the specie A or B is elected, then an election one of next specie is also required:

Specie (I-k): a CoA binding site of the claim 23;

Specie (II-k): a CoA binding site of the claim 24;

Specie (III-k): a CoA binding site of the claim 25;

Group V:

Specie IA: a crystallized ACPS enzyme in space group $P2_1$;

Specie IB: a crystallized ACPS enzyme in space group R3;

Group VI:

Specie IIIA: the structural coordinates of Figure 1;

Specie IIIB: the structural coordinates of Figure 2;

If the specie A or B is elected, then an election one of next specie is also required:

Specie (I-l): an active site of the claim 31;

Specie (II-l): an active site of the claim 32;

Specie (III-l): an active site of the claim 33;

Specie (IV-l): an active site of the claim 34.

Applicants are advised that a response to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. M.P.E.P. § 8 09.02(a).

Should applicants traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, the specie elections for examination purposes as indicated is proper.

Applicants are advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR § 1.143).

Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703) 305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolai Galitsky, Ph.D., whose telephone number is (703) 308-2422. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Patent Analyst, William Phillips, whose telephone number is (703) 305-3482 or to the Technical Center receptionist whose telephone number is (703) 308-019.

ARDIN H. MARSCHEL
PRIMARY EXAMINER

June 30, 2002

NMG